

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

Birgit OPPMANN, et al.

Application No.: 09/521,335

Filed: March 9, 2000

For: MAMMALIAN CYTOKINES;  
RELATED REAGENTS AND  
METHODS

Examiner: R.C. Hayes

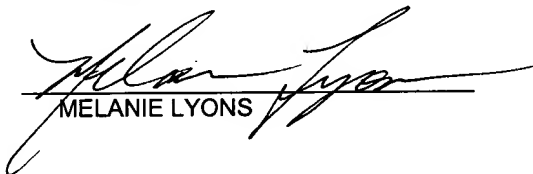
Art Unit: 1647

Conf. No.: 2729

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, August 7, 2003.

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

by:

  
MELANIE LYONS

**INFORMATION DISCLOSURE STATEMENT**

Sir:

The materials as listed in the copy of the Information Disclosure Statement filed on September 1, 2000, and Form PTO-1449 are again brought to the Examiner's attention pursuant to the duty of disclosure under 37 C.F.R. § 1.56, § 1.97, and § 1.98. Attached please find Form PTO-1449 listing references AA-BF. Also enclosed is a copy of the International Search Report, dated August 18, 2000, and received in connection with Applicants' corresponding PCT application. Copies of all documents cited on Form PTO-1449 and in the International Search Report are enclosed.

Citation of these documents should not be construed as a representation that the documents are in fact material or are in fact prior art with respect to the instant invention. The Examiner should not make any inference relating to the relative pertinence of cited references based upon the order in which the art is presented. Citation of these documents should not be construed as a representation that a search has been made or that more pertinent art may not be in existence. Applicants request that the Examiner fully consider the art cited in the attached Form PTO-1449.

**BEST AVAILABLE COPY**

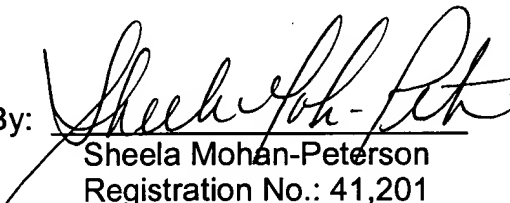
Applicants further request that the Patent and Trademark Office list all such art on the front of any patent issuing from this application.

No new references have been cited. The Applicants are merely providing duplicate references originally provided in U.S. Patent Application 09/267,901, filed March 11, 1999, and in the present application.

Applicants believe that no additional fees are due with this communication. Should this not be the case, the Commissioner is hereby authorized to debit any charges or refund any overpayments to DNAX Deposit Account No. 04-1239.

Respectfully submitted,

Date: August 7, 2003

By:   
Sheela Mohan-Peterson  
Registration No.: 41,201  
Attorney for Applicants

DNAX Research, Inc.  
901 California Avenue  
Palo Alto, CA 94304-1104  
Telephone (Switchboard): (650) 496-6400  
Telephone No. (Direct): (650) 496-1244  
Facsimile No.: (650) 496-1200

**BEST AVAILABLE COPY**

# COPY

PATENT CASE: DX0935K

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



---

In re Application of: Oppmann *et al.*For: Mammalian Cytokines; Related Reagents  
and Methods

Serial No.: 09/521,335

Filing Date: March 9, 2000

---

Examiner: To be assigned

Group Art Unit: 1643

RECEIVED  
AUG 14 2003  
TECH CENTER 1600/2900

September 1, 2000

Schering-Plough Corporation  
Kenilworth, New Jersey 07033Assistant Commissioner for Patents  
Washington, D.C. 20231

### INFORMATION DISCLOSURE STATEMENT

Sir or Madam:

Applicants respectfully request that the following documents, as listed below and on the accompanying form PTO-1449, be considered and made of record in the above-identified application. Enclosed is a copy of the International Search Report received in connection with Applicants' corresponding PCT application. Copies of documents that were listed in the International Search Report are attached unless previously cited in the priority application Serial No. 09/267,901, filed March 11, 1999, Docket No. DX0935. No further copies will be provided absent specific request.

### U.S. PATENT DOCUMENTS

5,457,038

5,741,772

### FOREIGN PATENT DOCUMENTS

WO 98/33922

WO 99/00415

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Assistant Commissioner for Patents, Washington, D.C. 20231 on this 1st day of September 2000.

September 1, 2000  
Date

Signature

Sandy S. Zaradic, Ph.D.  
Reg. No. 45,997

# COPY

BEST AVAILABLE COPY

WO 98/11225

WO 98/31811

WO 98/49307

EP 0 759 466

WO 95/11303

WO 99/20755

WO 99/28462

WO 99/35264

WO 99/40195

### OTHER DOCUMENTS

DeChiara *et al.*, "Mice lacking the CNTF receptor, unlike mice lacking CNTF, exhibit profound motor neuron deficit at birth", *Cell*, 83:313-322 (1995).

Elson *et al.*, "Definition: 'Homo sapiens cytokine-like factor-1 precursor (CLF-1) mRNA, complete cds'", *GenBank*, Accession Number AF059293 (1998).

Elson *et al.*, "Cytokine-like factor-1, a novel soluble protein, shares homology with members of the cytokine type I receptor family", *J Immunol*, 161:1371-1379 (1998).

Gately *et al.*, "The interleukin-12/interleukin-12-receptor system: role in normal and pathologic immune responses", *Annu Rev Immunol*, 16:495-521 (1998).

Gough *et al.*, "Definition: 'Murine mRNA for leukaemia inhibitory factor (LIF)'", *GenBank*, Accession Number X06381 (1995).

Habecker *et al.*, "A sweat gland-derived differentiation activity acts through known cytokine signaling pathways", *J Biol Chem*, 272:30421-30428 (1997).

McDonald, "Definition: 'Human CNTF gene for ciliary neurotrophic factor'", *GenBank*, Accession Number X60542 (1991).

Pennica *et al.*, "Definition: 'Mus musculus cardiotrophin-1 mRNA, complete cds'", *GenBank*, Accession Number U18366 (1995).

Pennica *et al.*, "Definition: 'Human cardiotrophin-1 (CTF1) mRNA, complete cds'", *GenBank*, Accession Number U43030 (1996).

Saotome *et al.*, "Definition: 'Mus musculus zinc finger protein (Pzf) mRNA, partial cds, and ciliary neurotrophic factor (Cntf) mRNA, complete cds'", *GenBank*, Accession Number U05342 (1995).

Shelton, "Are there more members of the CNTF-GPA family?", *Persp Devel Neurobiol*, 4:101-107 (1996).

Stahl *et al.*, "Definition: 'Human leukemia inhibitory factor (LIF) gene, complete cds'", *GenBank*, Accession Number M63420, J05436 (1994).

**BEST AVAILABLE COPY**

Trinchieri, "Proinflammatory and immunoregulatory functions of interleukin-12", *Intern Rev Immunol*, 16:365-396 (1998).

Ware *et al.*, "Targeted disruption of the low-affinity leukemia inhibitory factor receptor gene causes placental, skeletal, neural and metabolic defects and results in perinatal death", *Development*, 121:1283-1299 (1995).

Database DGENE, Last updated 13-JUN-1999, Result from sequence search using SEQ ID NO: 2, as the query and citing Accession Numbers: 99P-W94466, 98P-W56141, 98P-W29715, 98P-W56142, 98P-W29716, 97P-W29237, 96P-R88204, 95P-R83965; Derwent Information Ltd., London.

Database DGENE, Last updated 13-JUN-1999, Result from sequence search using SEQ ID NO: 12, as the query and citing Accession Numbers: 98P-W59805, 98P-W55012, 98P-W55011, 98P-W59804, 98P-W55014, 98P-W55015, 98P-W55016, 92P-R26334, 97P-W17859, 96P-R94576, 92P-R24273, 92P-R22228, 91P-R10795; Derwent Information Ltd., London.

Fischer *et al.*, "A bioactive designer cytokine for human hematopoietic progenitor cell expansion", *Nat Biotechnol*, 15:142-145 (1997).

Peters *et al.*, "In vivo and in vitro activities of the gp130-stimulating designer cytokine Hyper-IL-6", *J Immunol*, 161:3575-3581 (1998).

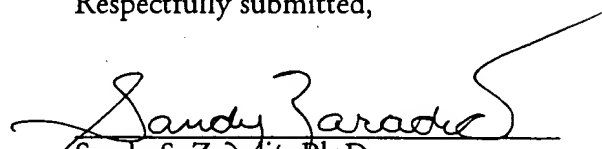
Rakemann *et al.*, "The designer cytokine hyper-interleukin-6 is a potent activator of STAT3-dependent gene transcription in vivo and in vitro", *J Biol Chem*, 274:1257-1266 (1999).

Shi *et al.*, "Computational EST database analysis identifies a novel member of the neuropoietic cytokine family", *Biochem Biophys Res Commun*, 262:132-138 (1999).

Senaldi *et al.*, "Novel neurotrophin-1/B cell-stimulating factor-3: a cytokine of the IL-6 family", *Proc Natl Acad Sci USA*, 96:11458-11463 (1999).

Applicant's submission of this Information Disclosure Statement is not an admission that any reference cited herein qualifies as prior art.

Respectfully submitted,

  
Sandy S. Zaradic, Ph.D.  
Attorney for Applicants  
Registration No. 45,997

Schering-Plough Corporation  
Patent Department K-6-1, 1990  
2000 Galloping Hill Road  
Kenilworth, New Jersey 07033  
Telephone No. (908) 298-7221

**BEST AVAILABLE COPY**

FORM PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO.: DX0935K		SERIAL NO.: 09/520335	
<b>INFORMATION DISCLOSURE STATEMENT FOR PATENT</b> (Use several sheets if necessary)				APPLICANT: Oppmann <i>et al.</i>		RECEIVED AUG 14 2003 TECH CENTER 1800/2900	
				FILING DATE: March 9, 2000			
U.S. PATENT DOCUMENTS							
*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILED DATE APPROPRIATE	
AA	5,457,038						
AB	5,741,772						
AC							
FOREIGN PATENT DOCUMENTS							
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO	
	AD WO 98/33922						
	AE WO 99/00415						
	AF WO 98/11225						
	AG WO 98/31811						
	AH WO 98/49307						
	AI EP 0 759 466						
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
AJ	DeChiara <i>et al.</i> , "Mice lacking the CNTF receptor, unlike mice lacking CNTF, exhibit profound motor neuron deficits at birth", <i>Cell</i> , 83:313-322 (1995).						
AK	Elson <i>et al.</i> , "Definition: 'Homo sapiens cytokine-like factor-1 precursor (CLF-1) mRNA, complete cds'", <i>GenBank</i> , Accession Number AF059293 (1998).						
AL	Elson <i>et al.</i> , "Cytokine-like factor-1, a novel soluble protein, shares homology with members of the cytokine type I receptor family", <i>J Immunol</i> , 161:1371-1379 (1998).						
AM	Gately <i>et al.</i> , "The interleukin-12/interleukin-12-receptor system: role in normal and pathologic immune responses", <i>Annu Rev Immunol</i> , 16:495-521 (1998).						
AN	Gough <i>et al.</i> , "Definition: 'Murine mRNA for leukaemia inhibitory factor (LIF)'", <i>GenBank</i> , Accession Number X06381 (1995).						
AO	Habecker <i>et al.</i> , "A sweat gland-derived differentiation activity acts through known cytokine signaling pathways", <i>J Biol Chem</i> , 272:30421-30428 (1997).						
AP	McDonald, "Definition: 'Human CNTF gene for ciliary neurotrophic factor'", <i>GenBank</i> , Accession Number X60542 (1991).						
AQ	Pennica <i>et al.</i> , "Definition: 'Mus musculus cardiotrophin-1 mRNA, complete cds'", <i>GenBank</i> , Accession Number U18366 (1995).						
AR	Pennica <i>et al.</i> , "Definition: 'Human cardiotrophin-1 (CTF1) mRNA, complete cds'", <i>GenBank</i> , Accession Number U43030 (1996).						
AS	Saotome <i>et al.</i> , "Definition: 'Mus musculus zinc finger protein (Pzl) mRNA, partial cds, and ciliary neurotrophic factor (Cntf) mRNA, complete cds'", <i>GenBank</i> , Accession Number U05342 (1995).						
AT	Shelton, "Are there more members of the CNTF-GPA family?", <i>Persp Devel Neurobiol</i> , 4:101-107 (1996).						
AU	Stahl <i>et al.</i> , "Definition: 'Human leukemia inhibitory factor (LIF) gene, complete cds'", <i>GenBank</i> , Accession Number M63420, J05436 (1994).						
AV	Trinchieri, "Proinflammatory and immunoregulatory functions of interleukin-12", <i>Intern Rev Immunol</i> , 16:365-396 (1998).						
AW	Ware <i>et al.</i> , "Targeted disruption of the low-affinity leukemia inhibitory factor receptor gene causes placental, skeletal, neural and metabolic defects and results in perinatal death", <i>Development</i> , 121:1283-1299 (1995).						
AX	Database DGENE, Last updated 13-JUN-1999, Result from sequence search using SEQ ID NO: 2, as the query and citing Accession Numbers: 99P-W94466, 98P-W56141, 98P-W29715, 98P-W56142, 98P-W29716, 97P-W29237, 96P-R88204, 95P-R83965; Derwent Information Ltd., London.						
AY	Database DGENE, Last updated 13-JUN-1999, Result from sequence search using SEQ ID NO: 12, as the query and citing Accession Numbers: 98P-W59805, 98P-W55012, 98P-W55011, 98P-W59804, 98P-W55014, 98P-W55015, 98P-W55016, 92P-R26334, 97P-W17859, 96P-R94576, 92P-R24273, 92P-R22228, 91P-R10795; Derwent Information Ltd., London.						
AZ	Fischer <i>et al.</i> , "A bioactive designer cytokine for human hematopoietic progenitor cell expansion", <i>Nat Biotechnol</i> , 15:142-145 (1997).						
EXAMINER				DATE CONSIDERED			
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609, Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							



BEST AVAILABLE COPY

FORM PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO.: DX0935K		SERIAL NO.: 09/521,335	
INFORMATION DISCLOSURE STATEMENT FOR PATENT (Use several sheets if necessary)				APPLICANT: Oppmann <i>et al.</i>		GROUP: To be assigned	
				FILING DATE: March 9, 2000			
U.S. PATENT DOCUMENTS							
*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME		CLASS	SUB- CLASS	IF IN DATE IF APPROPRIATE
	BA						
	BB						
	BC						
FOREIGN PATENT DOCUMENTS							
	DOCUMENT NUMBER	DATE	COUNTRY		CLASS	SUB- CLASS	TRANSLATION YES NO
	BD WO 95/11303						
	BE WO 99/20755						
	BF WO 99/28462						
	BG WO 99/35264						
	BH WO 99/40195						
	BI						
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
	BJ	Peters <i>et al.</i> , "In vivo and in vitro activities of the gp130-stimulating designer cytokine Hyper-IL-6", <i>J Immunol</i> , 161:3575-3581 (1998).					
	BK	Rakemann <i>et al.</i> , "The designer cytokine hyper-interleukin-6 is a potent activator of STAT3-dependent gene transcription in vivo and in vitro", <i>J Biol Chem</i> , 274:1257-1266 (1999).					
	BL	Shi <i>et al.</i> , "Computational EST database analysis identifies a novel member of the neuropoietic cytokine family", <i>Biochem Biophys Res Commun</i> , 262:132-138 (1999).					
	BM	Senaldi <i>et al.</i> , "Novel neurotrophin-1/B cell-stimulating factor-3: a cytokine of the IL-6 family", <i>Proc Natl Acad Sci USA</i> , 96:11458-11463 (1999).					
	BN						
	BO						
	BP						
	BQ						
	BR						
	BS						
	BT						
	BU						
	BV						
	BW						
	BX						
	BY						
	BZ						
EXAMINER				DATE CONSIDERED			
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609, Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

BEST AVAILABLE COPY